## AMENDMENTS TO THE CLAIMS

Claims 1-30    (Canceled)

31.    (Currently Amended)  ~~A method of~~ A computer readable medium having a computer program for optimizing a schedule for scheduling a plurality of agents within a call center, ~~the method comprising~~ the program for performing the steps of:

generating an initial schedule for the plurality of agents within the call center according to at least one rule, comprising,

displaying a current rule fragment that is a portion of a completed rule used to generate the initial schedule for the plurality of agents within the call center;

accepting user input to create the completed rule from the rule fragment, wherein user input includes a selection from a displayed list, and a value directly entered by the user;

accepting a tolerance input by the user, wherein the tolerance is placed on the completed rule;

applying branching rules to previous user selections, such that future selection lists may be generated based on the previous user selections; and

converting the completed rule into an internal representation suitable for input into a resource scheduling system for generating the initial schedule;

removing a shift from the initial schedule, thereby creating a shift-reduced schedule, wherein the shift comprises at least one agent, at least one time slot, and at least one break offset value, wherein the initial and shift-reduced schedules comprise a plurality of shifts assigning the plurality of agents to time slots and to break offset values;

creating a plurality of possible schedules for the plurality of agents within the call center, the plurality of possible schedules including adding an array of different possible shifts individually to the shift-reduced schedule, wherein the possible shifts are break-unspecified shifts and have indeterminate break times;

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evaluating a score function for each of the plurality of possible schedules, wherein the possible schedules have different possible shifts added, wherein the different possible shifts comprise all time slots in the schedule for which the plurality of agents can work;

selecting an improved schedule from among the plurality of possible schedules, wherein the improved schedule is characterized by an improved value of the score function; and

scheduling the plurality of agents within the call center in accordance with the improved schedule.

32.    (Currently Amended)  The ~~method~~ program of claim 31, wherein generating an initial schedule according to at least one rule further comprises accessing a dynamic database to populate the displayed lists depending on current values in the dynamic database.

33.    (Currently Amended)  The ~~method~~ program of claim 31, wherein generating an initial schedule according to at least one rule further comprises assigning the completed rule to at least one agent of the plurality of agents.

34.    (Currently Amended)  The ~~method~~ program of claim 31 further comprising repeatedly removing, adding, evaluating, and selecting until a locally optimal schedule is obtained.

35.    (Currently Amended)  The ~~method~~ program of claim of claim 31 further comprising:

generating at least one break-unspecified shift, including unscheduling at least one break to make the breaks indeterminate;

creating a plurality of possible break times for each break-unspecified shift, including adding an array of different possible break offset values

for each break-unspecified shift, evaluating a score function for each of the plurality of possible break times; and

selecting a schedule having improved break times from the possible schedules having possible break times, wherein the improved break times are characterized by improved scores.

36.    (Currently Amended)  The ~~method~~ program of claim 31, wherein the evaluation of the score function for a possible schedule includes the calculation of a stochastic factor.

37.    (Currently Amended)  The ~~method~~ program of claim 31, wherein the evaluation of the score function for a possible schedule includes selecting one of a plurality of predetermined values corresponding to distinct staffing levels for an interval in the possible schedule.

38.    (Currently Amended)  The ~~method~~ program of claim 35, wherein the plurality of predetermined values comprises four values corresponding to whether the interval in the possible schedule is very understaffed, slightly understaffed, slightly overstaffed, or very overstaffed.

39.    (Currently Amended)  The ~~method~~ program of claim 31, wherein the different possible shifts further comprise a subset of the plurality of agents and all time slots in the schedule for which the subset of the plurality of agents can work.

40.    (Currently Amended)  ~~A method of~~ A computer readable medium having a computer program for optimizing a schedule for scheduling a set of agents within a call center, ~~the method comprising~~ the program for performing the steps of:
    generating a preliminary schedule for the set of agents within the call center from an agent list, agent staffing requirements, and at least one rule specified by a user, including,
    displaying a current rule fragment that is a portion of a completed rule used to generate the preliminary schedule for the set of agents within the call center;

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accepting user input to create the completed rule from the rule fragment, wherein user input includes a selection from a displayed list, and a value directly entered by the user [,] ;

accepting a tolerance input by the user, wherein the tolerance is placed on the completed rule;

applying branching rules to previous user selections, such that future selection lists may be generated based on the previous user selections; and

converting the completed rule into an internal representation suitable for input into a resource scheduling system for generating the preliminary schedule, wherein the preliminary schedule comprises a plurality of shifts assigning the set of agents to slots and to break offset values;

removing from the preliminary schedule a first shift comprising a first agent of the set of agents;

responsive to removing the first shift from the preliminary schedule, generating a plurality of possible schedules having zero or more different possible shifts added, wherein the different possible shifts comprise time slots in the plurality of possible schedules for which the first agent can work, and wherein the different possible shifts are break-unspecified shifts and have indeterminate break times;

evaluating a score function for each of the plurality of possible schedules based on the indeterminate break times;

selecting an improved schedule from among the plurality of possible schedules, wherein the improved schedule is characterized by an improved value of the score function; and

scheduling the set of agents in accordance with the improved schedule.

41.     (Currently Amended)  The ~~method~~ program of claim 40, wherein generating an initial schedule according to at least one rule further comprises accessing a dynamic database to populate the displayed lists depending on current values in the dynamic database.

42.     (Currently Amended)  The ~~method~~ program of claim 40, wherein generating an initial schedule according to at least one rule further comprises assigning the completed rule to at least one agent of the set of agents.

43.     (Currently Amended)  The ~~method~~ program of claim 40 further comprising removing from the preliminary schedule a second shift comprising a second agent, wherein the different possible shifts comprise time slots in the plurality of possible schedules for which the second agent can work, and scheduling the second agent.

44.     (Previously Presented)  A system for generating a schedule for a plurality of agents within a call center, comprising:

an interface system configured to generate at least one rule, the interface system comprising,

at least one display device configured to display a current rule fragment that is a portion of a completed used in generating a schedule for the plurality of gents within the call center,

at least one input device configured to receive user input to create the completed rule from the rule fragment, wherein user input includes,

a selection from a displayed list,

a value directly entered by a user,

at least one self-referential constraint imposed on the completed rule, wherein the at least one self-referential constraint is assignable to at least one agent of the plurality of agents to be scheduled within the call center; and

at least one self-referential tolerance imposed on the completed rule;

a processor configured to apply branching rules to previous user selections, such that future selection lists may be generated based on the previous user selections, and

a conversion processing element configured to convert the completed rule into an internal representation suitable for input into a resource scheduling system for generating an initial schedule for the plurality of agents within the call center; and

a resource scheduling system configured to generate an optimized schedule from the initial schedule, including,

removing a shift from the initial schedule, thereby creating a shift-reduced schedule, wherein the shift comprises at least one agent, at least one time slot, and at least one break offset value, wherein the schedule comprises a plurality of shifts assigning the at least one agent of the plurality of agents to time slots and to break offset values;

creating a plurality of possible schedules for the plurality of agents, the plurality of possible schedules including adding an array of different possible shifts individually to the shift-reduced schedule, wherein the possible shifts are break-unspecified shifts and have indeterminate break times;

evaluating a score function for each of the plurality of possible schedules, wherein the possible schedules have different possible shifts added, wherein the different possible shifts comprise all time slots in the schedule for which the agent can work;

selecting an improved schedule from among the plurality of possible schedules, wherein the improved schedule is characterized by an improved value of the score function; and

scheduling the plurality of agents in accordance with the optimized schedule.


45. (Previously Presented) The system of claim 44, wherein interface system further comprises a dynamic database, wherein generating at least one rule further comprises accessing the dynamic database to populate the displayed lists depending on current values in the dynamic database.

46.　　(Canceled)

47.　　(Previously Presented)  A computer-readable medium, having instructions stored thereon, which when executed, cause at least one processor to:

generate an initial schedule for agents within a call center according to at least one rule, comprising,

displaying a current rule fragment that is a portion of a completed rule used to generate the initial schedule for the agents within the call center;

accepting user input to create the completed rule from the rule fragment, wherein user input includes a selection from a displayed list, and a value directly entered by a user;

accepting a tolerance input by the user;

applying branching rules to previous user selections, such that future selection lists may be generated based on the previous user selections; and

converting the completed rule into an internal representation suitable for input into a resource scheduling system for generating the initial schedule;

remove a shift from the initial schedule, thereby creating a shift-reduced schedule, wherein the shift comprises at least one agent, at least one time slot, and at least one break offset value, wherein the schedule comprises a plurality of shifts assigning the agents to time slots and to break offset values;

create a plurality of possible schedules for the agents within the call center, including adding an array of different possible shifts individually to the shift-reduced schedule, wherein the possible shifts are break-unspecified shifts and have indeterminate break times;

evaluate a score function for each of the plurality of possible schedules, wherein the possible schedules have different possible shifts added, wherein the different possible shifts comprise all time slots in the schedule for which the agent can work;

select an improved schedule from among the plurality of possible schedules, wherein the improved schedule is characterized by an improved value of the score function; and

schedule the agents in accordance with the improved schedule.

48. (Previously Presented) The computer-readable medium of claim 47, wherein generating an initial schedule according to at least one rule further comprises accessing a dynamic database to populate the displayed lists depending on current values in the dynamic database.

49. (Previously Presented) The computer-readable medium of claim 47, wherein generating an initial schedule according to at least one rule further comprises assigning the completed rule to at least one agent of the plurality of agents.

50. (Previously Presented) The computer-readable medium of claim 47, further comprising repeatedly removing, adding, evaluating, and selecting until a locally optimal schedule is obtained.

51. (Previously Presented) The computer-readable medium of claim 47, wherein the instruction, when executed, further cause the at least one processor to:
   generate at least one break-unspecified shift, including unscheduling at least one break to make the breaks indeterminate;
   create a plurality of possible break times for each break-unspecified shift, including adding an array of different possible break offset values
   for each break-unspecified shift, evaluate a score function for each of the plurality of possible break times; and
   select a schedule having improved break times from the possible schedules having possible break times, wherein the improved break times are characterized by improved scores.

52. (Previously Presented) The computer-readable medium of claim 47, wherein the evaluation of the score function for a possible schedule includes the calculation of a stochastic factor.

53. (Previously Presented) The computer-readable medium of claim 47, wherein the evaluation of the score function for a possible schedule includes selecting

one of a plurality of predetermined values corresponding to distinct staffing levels for an interval in the possible schedule.

54.    (Previously Presented)  The computer-readable medium of claim 51 wherein the plurality of predetermined values comprises four values corresponding to whether the interval in the possible schedule is very understaffed, slightly understaffed, slightly overstaffed, or very overstaffed.

55.    (Previously Presented)  The computer-readable medium of claim 47, wherein the different possible shifts further comprise a subset of the at least one agent and all time slots in the schedule for which the subset of agents can work.